PRELIMINARY AND SHORT REPORTS

EXPERIMENTAL CHROMOBLASTOMYCOSIS IN MAN*

R. D. Azulay†, M. D.

In a previous work (1) I had the opportunity to give the results of my experiments in animals. A strain of *Fonsecaea Pedrosoi*, Negroni, 1936 (Brumpt 1921) inoculated in the testicles of guinea pigs and rats produced the typical granuloma of Chromoblastomycosis; retroculture and serial passages in those animals were successful. By other routes (subcutaneous and peritoneal) I failed to produce the disease experimentally.

Some authors, for example Medlar (2 and 3), Lane (4), Pedroso and Gomes (5), Montpellier and Catonei (6), Gomes and Pessoa (7), Balina, Bosq, and Negroni (8), Floriano (9), Mackinnon (10), Carrion and Emmons (11), Oscar Pereira (12), Mazza and Nino (13), Gomes (14) and Simson et al. (15) had already taken the opportunity of making inoculations in various species of animals. But, as far as I know from the study of the literature, no one has, up to now, made any report concerning the inoculation in man.‡

In 1946, a patient volunteered to permit me to try the experimental reproduction of chromoblastomycosis in man.

Material and technic:—A recently isolated strain of *Fonsecaea Pedrosoi* was inoculated in Sabouraud media for one month. With 10 cc. of saline water a suspension was made; two drops of this was inoculated by scarification in the anterior aspect of the leg; that area of the skin was covered with sterile gauze for 72 hours.

Results:—72 hours after the inoculation there was, at the point of the inoculation, an erythema with mild infiltration measuring 10 cm. and having in the center a discrete pustule. One week later, that lesion had disappeared.

One month later a small papule appeared at the point of inoculation; this papule kept growing very slowly until it measured 15 cm. three months after the inoculation. Six months later two new lesions appeared in the neighborhood of the first lesion. The three lesions were papules with discrete erythema and mild desquamation; one year later they started to show verrucous aspect.

One of these lesions was biopsied and its histopathology showed:

Epidermis:—Discrete and irregular hyperplasia of the rete pegs.

Dermis:—Large foci of infiltration, which show 2 fundamental types of lesions: a) an acute inflammation represented by some micro-abcess; b) a granuloma formed by epithelioid cells and Langhan's giant cells forming typical tuberculoid nodules and by foreign body giant cells.

Some of those micro-abcesses have a very marked histiocytic wall giving the impression that the exudative process was being replaced by the productive one.

The fungus, represented by round and brown bodies, was found inside the micro-abcess and giant cells.

Retro-cultures were obtained from the material of the biopsied lesion.

---

* From the Department of Dermatology and Syphilology of the Faculdade Fluminense de Medicina (Diretor: Prof. P. Parreiras Horta), Niteroi, Estado do Rio de Janeiro.

Received for publication June 16, 1952.

† Free-professor at Faculdade Fluminense de Medicina and Faculdade Nacional de Medicina, Universidade do Brasil.

‡ At the Fifth International Congress for Microbiology held in Rio de Janeiro, in August 1950, Dr. Alfonso Trejos had the opportunity to show me a lesion of experimental chromoblastomycosis on his own forearm; at that time I showed him the pictures of my experiment made in 1946.

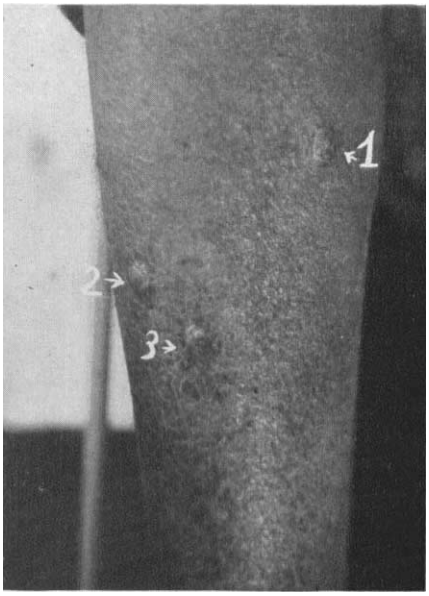

FIG. 1. Experimental chromoblastomycosis in man produced by the scarification of *Fonsecaea Pedrosoi*. Lesion 1 was produced by the scarification; lesions 2 and 3 appeared 6 months later, probably by self-inoculation.

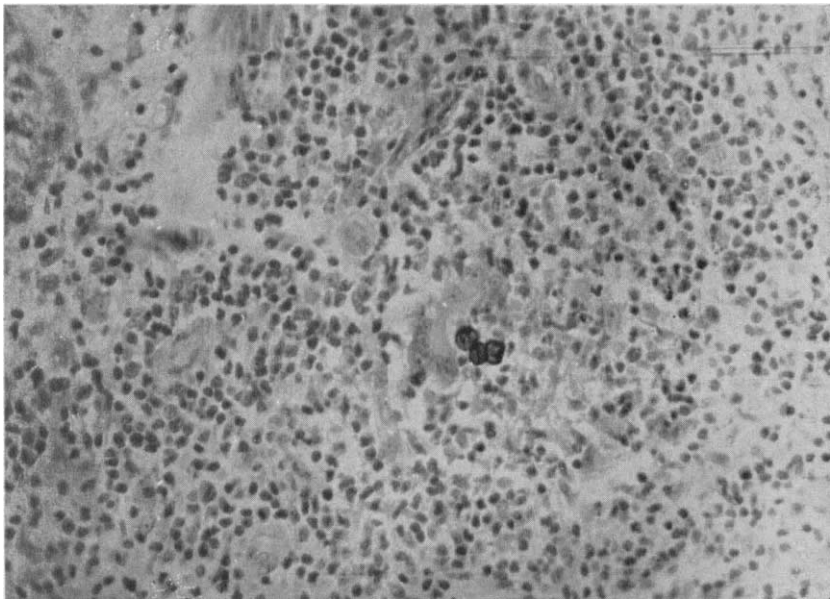

FIG. 2.—Histopathology of the lesion 1:—One can see 3 round dark-brown parasites.

SUMMARY

A suspension of a culture of *Fonsecaea Pedrosoi* was inoculated by scarification in a human volunteer.

The lesions so produced showed the clinical, histopathologic and mycologic characteristics of chromoblastomycosis.

As far as I could ascertain from the literature, this is the first report of experimental chromoblastomycosis in man.

REFERENCES

1. AZULAY, R. D.: Experimental studies on chromoblastomycosis. J. Invest. Dermat. 6(5): 281–292, Oct. 1945.
2. MEDLAR, E. M.: A cutaneous infection caused by a new fungus, Phialophora verrucosa, with a study of the fungus. J. Med. Research, **32:** 507–523, 1915.
3. MEDLAR, E. M.: A new fungus Phialophora verrucosa, pathogenic for man. Mycology, **7:** 4: 200–203, 1915.
4. LANE, C. G.: A cutaneous disease caused by a new fungus, Phialophora verrucosa. J. Cut. Dis., **33:** 840–846, 1915.
5. PEDROSO, A. E GOMES, J. M.: Quatro casos de dermatite verrucosa produzida pela Phialophora verrucosa. Ann. Paulistas Med. Cir., 11, **3:** 53–61, 1920.
6. GOMES, J. M. E PESSOA, S.: Reprodução experimental de dermatite verrucosa. Brasil Médico, **43: 10:** 255–257, 1929.
7. POZOJEWA, N. C.: Ein Fall von Chromoblastomykose. Dermat. Wchnschr., 90, **18:** 615–617, 1930, 3 figs.
8. BALINA, P. S., BOSQ, P., NEGRONI, P. E QUIROGA, M.: Um caso de chromoblastomicosis autoctono de Argentina. Rev. Arg. Dermatosif., **16:** 369–379, 1932.
9. ALMEIDA, FLORIANO: Chromoblastomicose experimental em sapos. Rev. Biol. Hyg. (São Pablo), 5, **2:** 95, 1934.
10. MACKINNON, J. E.: Estudio del primer caso uruguayo de chromoblastomycosis y revista critica sobre la enfermedad. Arch. Urug. Med. Cir. Esps., 5, **2:** 201–226, 1934.
11. CARRION, A. L., AND KOPPISCH, E.: Observations on dermatomycosis in Puerto Rico. Report of a case of chromoblastomycosis. Puerto Rico, J. Pub. Health & Tropical Med., 9, **2:** 169–193, 1933.
12. CARRION, A. L., AND EMMONS, C. W.: A spore form common to three etiologic agents of chromoblastomycosis. Puerto Rico J. Pub. Health & Trop. Med., 11, **1:** 114–115, 1935.
13. PEREIRA, OSCAR.: Mycologia das chromoblastomycoses. Identificação dos dois primeiros casos autoctones do Rio Grande do Sul. Tese, 1938.
14. MAZZA, S., AND NINO, F. L.: Estudio micologico de un hongo aislado de un caso autoctono de chromoblastomicosis. (Santiago del Estero) 9a. reunion Soc. Arg. Pat. de Norte, Mendoza. 1935. **3:** 1577, 1598, 1939.
15. GOMES, L. M.: Chromoblastomycosis caused by a fungus of the genus Hormodendrum. Arch. Dermat. & Syphil., 38, **1:** 12–18, 1938.
16. SIMSON, W. F., HARRINGTON, C., AND BARNETSON, J.: Chromoblastomycosis: a report of six cases. J. Path. Bact. 45, **2:** 191–198, 1943.